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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,465

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EXAMINER

HU, HENRY S

ART UNIT

PAPER NUMBER

1796

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,465

Applicant(s)

MORIKAWA ET AL.

Examiner

HENRY S. HU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment of April 30, 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-17 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-089)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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1. USPTO has received **Amendment** and **Declaration** (written by Morikawa) both filed on April 30, 2008. With such an amendment, **Claims 1, 3-4, 7, 13-16 and 17 are amended; Claims 2, 5-6 and non-elected Claim 18 (Group II) are cancelled, while new independent Claim 19 is added.** To be more specific, parent **Claim 1** was amended to incorporate limitations of two dependent Claims 2 and 5, while newly added parent **Claim 19** is a combination of three original Claims 1-2 and 6. Dependent Claims 2 and 5-6 are cancelled accordingly. The Examiner thereby withdraws claim objection in the previous Office Action dated December 31, 2007. **Claims 1, 3-4, 7-17 and 19 with two independent claims (Claim 1 and Claim 19) are now pending.** An action follows.

DETAILED ACTION

Response to Argument

2. Applicant's argument filed on April 30, 2008 has been fully considered but they are not persuasive. The focal arguments related to the patentability will be addressed as follows: Such an amendment involves two things on parent Claims 1 and 19 as: parent **Claim 1** was once-amended to incorporate limitations of two dependent Claims 2 and 5, while newly-added parent **Claim 19** is a combination of three original Claims 1-2 and 6. After very close consideration, all previous 102(b) and 103(a) rejections are modified and/or combined into 103(a) rejections. A Final action follows:

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. The limitation of parent **Claim 1** of the present invention relates to a fluoropolymer composition comprising two components including: a methylene group-containing fluoropolymer (A) and a hydrosilylation catalyst (B),

wherein said methylene group-containing fluoropolymer (A) is capable of hydrosilylation in the presence of said hydrosilylation catalyst (B).

said methylene group-containing fluoropolymer (A) is a vinylidene fluoride-based copolymer,

said hydrosilylation reaction-capable compound (C) is a compound capable of hydrosilylation with said methylene group-containing fluoropolymer (A),

each of both the main chain termini in said methylene group-containing fluoropolymer (A) is a carbon-carbon double bond, and said hydrosilylation reaction-capable compound (C) is a Si-H group-containing compound (C1) having at least two Si-H groups within a molecule thereof.

Newly-added parent **Claim 19** relates to a fluoropolymer composition of parent **Claim 1** and is a combination of limitations from three original Claims 1-2 and 6.

*See other limitations of dependent **Claims 3-4 and 7-17**.*

5. **Claims 1, 3-4, 7-17 and 19 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Langstein et al. (US 5,554,689)** in view of **Carter et al. (US 4,057,566)**, **Carter et al. (US 4,100,136)** or **Takago et al. (EP 527,008 A1)** for the reasons set forth in paragraphs **5-8 and 10** of office action dated 12-31-2007 as well as the discussion below.

6. **Claims 1, 3-4, 7-17 and 19 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Carter et al. (US 4,057,566)**, **Carter et al. (US 4,100,136)** or **Takago et al. (EP 527,008 A1)**, in combination or alone in view of **Langstein et al. (US 5,554,689)** for the reasons set forth in paragraphs **5-8 and 12** of office action dated 12-31-2007 as well as the discussion below.

7. In view of **two** pending parent claims including the once-amended **Claim 1** and the newly-added **Claim 19**, which it now involves **two** things as: parent **Claim 1** was amended to incorporate limitations of two dependent Claims 2 and 5, while newly added parent **Claim 19** is a combination of three original Claims 1-2 and 6. It is noted that 103(a) rejections are applied

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to dependent Claims 2 and 6 in earlier office action. Therefore, fundamentally the same rationale for rejection can be still applied by using all the same references in combination.

8. Regarding the first new 103 rejection, **Langstein** is silent about using fluorocarbon polymers having -Si-H on both endgroups mentioned as (A) component while using an additional (C) component having double bonds on both terminuses. **Each of Carter (566), Carter (136) and Takago has taught such a subject matter.** For instance, see **Carter (566)** at abstract; column 4, line 40-61; column 6, line 39-42. See **Carter (136)** at abstract; column 4, line 39-60; column 6, line 39-42. See **Takago** at abstract; see the double bond as end group factor "X" on fluorosilicone (A) at page 6, line 43 – page 7, line 42. By doing so, such a composition obtains more diversified hydrosilylation product and may be with improving reversion resistance in the cured state (For instance, see Carter "566" at column 1, line 50-59). With respect to newly added parent **Claim 19** with bifunctionality which is exactly reversed on polymer (A) and compound (C), Applicants have not yet shown the criticality why two bifunctional compounds are required in such a combination. It is noted that the same chemistry is applied.

9. Regarding the second new 103 rejection, each of **Carter (566), Carter (136) and Takago** has disclosed the preparation of a composition with combination of three components including: (A) fluorocarbon siloxane polymers having -Si-H on both endgroups, (B) fluorocarbon siloxane polymers having double bonds on both terminuses, and (C) a hydrosilylation catalyst such as hexachloroplatinic acid. Therefore, each of Carter (566),

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Carter (136) and Takago is **silent about using VDF-based copolymers** as fluorocarbon polymers having methylene groups mentioned as (A) component in Claim 1. **Langstein has explicitly taught using such a VDF-containing fluoropolymer type.** For instance, see column 2, line 37-45; column 4, line 58 – column 6, line 21; particularly see the use of VDF monomer unit at column 5 at lines 23 and 62. By doing so, such a composition obtains more diversified hydrosilylation product and with improving heat, oil, ozone and irradiation resistance and better mechanical properties (column 1, line 8-11). With respect to newly added parent **Claim 19** with bifunctionality exactly reversed on polymer (A) and compound (C), Applicants again have not yet shown the criticality why two bifunctional compounds are required in such a combination. It is noted that the same chemistry is applied.

10. Applicants two arguments as “Langstein et al. does NOT have crosslinking groups at both ends of the polymer” (see middle section at page 7 of Remarks) and “the double bonds is occurred in the middle of the polymer chain” (see bottom section at page 8 of Remarks) may be improper. Based on the fact that Langstein’s fluoromonomers are copolymerized with some suitable monomers containing at least two olefinic double bonds such as unconjugated dienes in this purpose (see Langstein at column 3, line 36-42), “at least some” (if not all) of Langstein’s fluoropolymers will thereby bear lateral double bonds on both terminals. See column 3, line 37-45; column 4, line 57 – column 5, line 57.

11. Applicants other argument as “Carter “566”, Carter “136” and EP “088” only disclose using a fluoropolymer siloxane polymer” may be also improper (see bottom section at page 7 of

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Remarks). Attention is directed to the fact that fluoropolymers (A) disclosed in both parent Claims 1 and 19 only require methylene/VDF containing and with the claimed bifunctionalities in both terminals. The scope according to MPEP thereby does NOT exclude siloxane segment inside fluoropolymer (A).

Applicants' **Declaration** (written by Morikawa) filed on April 30, 2008 alleges that the results corresponding to Langstein did not maintain a sheet form after immersion in acetone (see top section at page **2** of Remarks). Such a statement does not include at all in current parent Claims 1 and 19.

Conclusion

12. Applicant's amendment **necessitated the new ground(s) of rejection presented in this Office action.** Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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13. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

//Peter D. Mulcahy//
Primary Examiner, Art Unit 1796

/Henry S. Hu/
Examiner, Art Unit 1796

July 1, 2008